



Implications of climate change for skin cancer prevention in Australia

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Abstract:

It is estimated that nearly 450,000 Australians get skin cancer every year. Ultraviolet (UV) radiation from sunlight has been identified as the cause of more than 95% of skin cancers in Australia. Accordingly, the focus of skin cancer prevention programs is reducing exposure to UV radiation. In Victoria, improvements in sun protection behaviours and reductions in sunburn and melanoma incidence rates among younger people have been observed since the SunSmart program was established in 1988. However, climate change has the potential to undermine these successes. First, surface UVB radiation is dependent on stratospheric total ozone amounts. While signs of impact of international restrictions on the production of ozone-depleting substances have been observed, improvements have not yet returned ozone to pre-1970s levels. Interactions between ozone depletion and climate change may slow the recovery of the ozone layer and compound increases in UV radiation at some latitudes. Before recovery, it is expected that higher levels of UV radiation will continue in most Australian regions, with an associated higher risk of skin cancer. Indeed, recent data show increases in surface UV radiation throughout Australia since the 1970s. Second, mean temperatures in Australia have increased over the past 30 years and are projected to rise further by 2030. Australian data shows that with higher temperatures, adults spend more time outdoors, are less likely to wear covering clothing and more likely to be sunburnt. Hence, rising temperatures can be expected to result in increases in sun exposure, sunburn and correspondingly, skin cancer risk.

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Solar Radiation, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Climate Change and Human Health Literature Portal

Non-United States

Non-United States: Australasia

Health Impact: 

specification of health effect or disease related to climate change exposure

Cancer

Resource Type: 

format or standard characteristic of resource

Policy/Opinion

Timescale: 

time period studied

Time Scale Unspecified